

Deuterosaurus should not be identical with *Brithopus*, in which event the latter name should stand. If the skull referred to *Deuterosaurus* indicate an animal of the same size as the type of *Brithopus*, it would be evident that the incisor teeth were of larger size in proportion to the limb-bones than in *Titanosuchus*.

EXPLANATION OF THE PLATES.

PLATE LIV.

Associated vertebræ of a Theriodont from the Karoo system of the Cape Colony, $\frac{2}{3}$ nat. size.

- Fig. 1. Right lateral aspect of two dorsal vertebræ.
 2. Reversed view of the left side of an imperfect neural arch of a dorsal vertebra.
 3. Anterior aspect of an imperfect lumbar vertebra.
pr.z., prezygapophysis; *pt.z.*, postzygapophysis; *t.p.*, transverse process;
r., facet for capitulum of rib.

PLATE LV.

- Fig. 1. Dorsal aspect of the restored right scapula of a Theriodont from the Karoo system of the Cape. $\frac{1}{3}$. *a.*, acromial process; *b.*, supra-acromial process; *gl.*, glenoidal surface.
 2. Dorsal aspect of the imperfect right scapula of *Ptychosiagum orientale* from the Panchet beds of the Gondwana system of India. $\frac{1}{4}$. Letters as in fig. 1.
 3. Palmar aspect of the restored left humerus belonging to the same individual as the scapula represented in fig. 1. $\frac{1}{3}$. *ent.f.*, entepicondylar foramen; *r.c.*, radial condyle.
 4. Palmar aspect of the distal portion of the left humerus of *Brithopus priscus*, from the Permian of Russia. $\frac{1}{3}$. *ect.f.*, ectepicondylar foramen; other letters as in fig. 3.

4. Descriptions of thirteen new Species of Land-Shells, with a Note on *Bulimus fulminans*. By G. B. SOWERBY, F.L.S., F.Z.S.

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(Plate LVI.)

1. *HELIX* (*GEOTROCHIUS*) *HORDERI*, n. sp. (Plate LVI. fig. 1.)

H. testa anguste perforata, elata, conica, solidiuscula, oblique subtilissime striata, citrina; spira elata, apice acuta; anfractus 6, convexiusculi, ultimus leviter inflatus, ad peripheriam obsolete angulatus, basi convexus; apertura lata, obliqua; peristoma late expansum et reflexum, columellari intus tubercula parva dentiformi munito, extus dilatato, complanato.

Alt. 35, *maj. diam.* 30 mill.

Hab. Nova Guinea.

A fine yellow trochiform species presenting a character quite unusual in the "*Geotrochus*" section, namely, a tooth-like nodule on the inside of the columellar lip.

2. *HELIX (CORASIA) WOODFORDI*, n. sp. (Plate LVI. fig. 6.)

H. testa imperforata, subconica, tenuis, pellucida, lutescente alba, irregulariter malleata, oblique striata; spira breviter conica, obtusiuscula; anfractus 4, rapide accrescentes, convexiusculi, ultimus inflatus, ad peripheriam acute carinatus, linea carinali opaca alba; apertura ampla, obliqua; peristoma tenuiter reflexum, rubrum.

Alt. 15, diam. 19 mill.

Hab. Guadalcanar, Iuss. Salomonis.

A pretty, delicate, transparent shell, allied to *H. lactiflora*, but of a lighter substance and smaller size, characterized by a somewhat prominent white keel and a thin pink lip. Specimens of this species were collected by Mr. Woodford in the above-mentioned locality, and presented to the National Museum.

3. *TROCHOMORPHA GODETI*, n. sp. (Plate LVI. fig. 10.)

T. testa late et profunde umbilicata, depressa, tenuiuscula, oblique striata, fulvo-cornea, fasciis castaneis angustis 2, ad peripheriam ornata; spira levissime elevata; sutura impressa, carinata; anfractus 5½, convexiusculi, ultimus non descendens, haud carinatus; umbilicus ⅓ diametri æquans; apertura obliqua, subovalis; peristoma paulo reflexum.

Diam. 19, alt. 9 mill.

Hab. Guadalcanar, Iuss. Salomonis (*Woodford*).

4. *BULIMUS SUPERSTRIATUS*, n. sp. (Plate LVI. fig. 9.)

B. testa imperforata, ovato-conica, solidiuscula, nitida, longitudinaliter rugata, spiraliter striata, castanea, nigro-fusco obscure flammulata et maculata; spira conica, apice acutiuscula; anfractus 5, convexiusculi, ad suturam crenulati, ultimus spiram superans, striis numerosis spiralibus incisus, basin versus evanidis sculptus; apertura ovalis, intus cæruleo-purpurea; peristoma vix incrassatum, luteum.

Long. 54, diam. 29 mill.

Hab. Yquitos, Peruviae.

Resembling *B. taylorianus* (Reeve), but spirally sculptured, thus presenting a character quite unusual in the genus and unknown among the species of this group.

5. *BULIMUS SALTERI*, n. sp. (Plate LVI. fig. 4.)

B. testa imperforata, ovato-oblonga, solidiuscula, longitudinaliter irregulariter striata, rugose malleata, fulva, hic illic nigro-fusco sparsim radiata, maculis fuscis irregularibus conspersa; spira elongata, apice obtusa, sutura irregulariter subcrenulata; anfractus 6, convexiusculi, supremi minute granulati, ultimus spiram superans, oblongus, leviter inflatus; apertura ovato-oblonga, intus dilute purpurascens, fusco-purpureo late limbata; peristoma vix incrassatum, haud reflexum, columella rectiuscula.

Long. 70, maj. diam. 35 mill.

Var. γ . *Haud malleata, fusco sparsim radiata, sed non maculata; striis conspicuis, rugosis.*

Long. 86, *maj. diam.* 44 mill.

Hab. Catamarca, Andes Peruvixæ.

The typical shell has a peculiarly malleated surface, and the indentations are rendered conspicuous by the brown markings. The variety, wanting these characters, presents so different an appearance that it might be taken for a distinct species. There is, however, but little difference in the form, the colouring of the mouth is the same, the brown rays also are similar in colour and disposition. The longitudinal striæ are closer and more regular, taking the place of the irregular indentations characteristic of the typical form.

The two shells form part of the collection of Mr. S. J. Da Costa, and there is a specimen of each variety in the National Collection at South Kensington.

6. *ACHATINA BARRIANA*, n. sp. (Plate LVI. fig. 2.)

A. testa ovato-conica, tenuis, cornea, maculis parvis fuscis ad suturam et ad peripheriam tæniata, maculis parvis albidis hic illic floccata; spira conica, apice obtusa; anfr. 6, convexiusculi, supremi læves, sequentes confertissime lirati, liris rugosis, ultimus spiram superans, inflatus; apertura ampla, vix obliqua; peristoma simplex, tenue; columella leviter inflexa, oblique truncata.

Long. 43, *diam.* 23; *apert. longa* 24, *lata* 14 mill.

Hab. Calabar, Africa?

A light shell of elegant form, sculptured with very fine close corrugated ridges. The body-whorl is sprinkled with small white flake-like spots.

I have only seen two specimens of this species; they were found in company with *Perideris auripigmentum*, and are probably from the same locality.

7. *ACHATINA SMITHI*, n. sp. (Plate LVI. fig. 3.)

A. testa ovato-turrita, tenuis, pellucida, cornea, nitida, strigis longitudinalibus numerosis undulatis pallidis picta; spira elatiuscula, turrita, apice obtusa; anfractus 6, convexi, spiraliter minutissime sed densissime striati, sutura impressa, haud crenulata; anfr. ultimus spiram paulo superans, leviter inflatus; apertura verticalis, sinuato-ovalis; peristoma simplex; columella recta, oblique truncata.

Long. 30, *diam.* 15; *apert. longa* 14, *lata* 7 mill.

Hab. Calabar, Africa?

A delicate pellucid species; a true *Achatina*, but approaching in form and texture some of the species of *Glandina*. The longitudinal streaks are faint, but numerous and pretty regular; the spiral striæ seen through a lens are exceedingly fine and close.

Of this species I have only seen a single specimen; its habitat is uncertain, but it is probably from the same locality as *A. barriana*.

8. *ACHATINA LINTERÆ*, n. sp. (Plate LVI. fig. 11.)

A. testa ovata, tenuis, nitens, alba, epidermide fulva induta, maculis conspicuis fuscis unifasciatim dispositis supra medium picta; spira conica, apice obtusa; sutura impressa, subcrenulata; anfractus 7, convexiusculi, grana-plicati; anfr. ultimus inflatus, supra obsolete grana-plicatus, deinde lævigatus; apertura verticalis, subovata, fauce albida cærulea limbata; columella fere recta, dilute cærulescens; peristoma simplex, tenue, fusca.

Long. 85, *diam.* 47 mill.

Hab. Port Elizabeth.

A very handsome species, of which the type (at present unique) is in Miss Linter's collection. It is distinguished from its congeners chiefly by a conspicuous row of brown blotches a little removed from the suture.

9. *BULIMUS (BULIMINUS?) GOMEZI*, n. sp. (Plate LVI. fig. 8.)

B. testa anguste perforata, oblongo-conica, solidiuscula, polita, griseo-albida, flaveo-tincta, seriebus 2-3 macularum fuscæ cincta, nigro-præmiscue punctata, basi lineis 2 nigris ornata; spira elato-conica, apice acuta, nigra; anfractus 7, leviter convexi, læves; anfr. ultimus spiram fere æquans, subventricosus; apertura subovata, fauce nigro-fusca; peristoma acutum, album, marginibus callo tenuissima junctis, margine columellari supra tenuiter dilatata, perforationem semi-occultante, fusca.

Long. 21, *lat.* 13 mill.

Hab. Usagara, Africæ meridionalis.

A pretty species, somewhat allied to *B. venustus* (Morelet); rather solid, with a polished surface; greyish white, tinged with pale yellow near the suture, painted with rows of brown spots, a promiscuous scattering of black dots, and two blackish lines towards the base; the apex is black and the interior very dark brown. Several specimens, somewhat varying in the disposition of the spots, but with the same general characteristics, are in the collection of Mr. S. J. Da Costa.

10. *BULIMUS (BULIMINUS?) HANNINGTONI*, n. sp. (Plate LVI. fig. 7.)

B. testa anguste rimata, pyramidali turrata, fusca, nitens, tenuis, longitudinaliter obsolete et irregulariter striata; spira elongato-conica, acuta; anfractus 10, convexiusculi; sutura impressa, anfractus ultimus $\frac{1}{3}$ longitudinis æquans, paulo inflatus; apertura fere verticalis, ovata; peristoma simplex, acutum, marginibus callo tenuissimo junctis, margine columellari supra dilatata, perforationem occultante.

Long. 16, *diam.* $6\frac{1}{2}$ mill.

Hab. Usagara, Africæ meridionalis.

A small, horny species of the form of a *Stenagyra*, with a very acute spire. The type is in the collection of Mr. S. J. Da Costa.

11. *LEPTOPOMA WOODFORDI*, n. sp. (Plate LVI. fig. 13.)

L. testa profunde umbilicata, globoso-conica, tenuis, pellucida, albida, spiraliter lirata, oblique striata, ad peripheriam carinata; spira conica, parum elevata, acutiuscula; anfractus 5, convexi, rotundati, anfr. ultimus inflatus, infra levigatus, convexus; apertura ampla, subcircularis; peristoma tenue, expansum, margine columellari angusto, extus angulato.

Diam. 21, *alt.* 18 mill.

Hab. Guadalcanar, Ins. Salomonis.

A whitish, pellucid, spirally ridged species with rather a large, nearly circular mouth and thinly expanded lip. The columellar margin is narrow, with an angle on the outside. One of the specimens in the National Collection is 23 millim. in diameter, while another adult specimen does not exceed 15 millim.

12. *CYCLOSTOMA HANNINGTONI*, n. sp. (Plate LVI. fig. 14.)

C. testa umbilicata, globoso-conica, solidiuscula, undique spiraliter multilirata, striis incrementi decussata, sordide albida, griseo-radiata, fusco bifasciata; spira breviter conica, apice rufo-fusca, acutiuscula; anfractus 5, convexi, rotundati, ad suturam minutissime crenulati; anfr. ultimus brevis, basi rotundatus; apertura leviter obliqua, subcircularis, fauce fusca; peristoma tenue, leviter expansum, crenulatum, album.

Diam. 24, *alt.* 23 mill.

Hab. Africa æquatorialis.

This species is allied to *C. insulare* (Pfr.), but it is considerably larger than any specimen I have seen of that species, the body-whorl is larger in proportion to the spire, and the spiral ridges are sharper and more prominent. The specimen, at present unique, is in the collection of Mr. S. J. Da Costa.

13. *BULIMUS (MESEMBRINUS?) BOWKERI*, n. sp. (Plate LVI. fig. 5.)

B. testa subrimata, ovato-conica, tenuiuscula, longitudinaliter rugoso-striata, sulcis transversis irregularibus plus minusve cancellata, dilute purpurea, versus apicem fusca; spira elato-conica, apice obtusiuscula; sutura impressa, vix crenulata; anfractus 5, leviter convexi; anfr. ultimus spiram paulo superans, leviter inflatus, obliquiusculus, basi rotundatus, vix attenuatus; apertura obliqua, ovalis, intus aureo-fusca; peristoma simplex, rectum, margine dextro arcuato, albo; columellari fusco, superne tenuiter effuso.

Long. 20, *maj. diam.* 11 mill.

Hab. Somerset (East), Cape Colony. Forest about 3000 feet above sea-level (*Col. Bowker*).

A species having very much the form and appearance of a *Succinea*. Several specimens presented to the National Collection by Colonel Bowker present but little variation in form and colour, but in some specimens the spiral grooves are much more marked than in others; in one or two they are almost confined to the penultimate and antepenultimate whorls.

Note on BULIMUS FULMINANS.

Specimens of a supposed new species of *Bulimus* from Mount Roraima, Brit. Guiana, having recently been presented by Miss Linter to the Natural History Museum, South Kensington, I was asked to give my opinion upon it, and to describe it if new. Comparing it with *B. fulminans* (Nyst), *B. blainvilleanus* (Pfr.), and *B. loveni* (Pfr.), it seemed pretty evident that if these could be properly considered as three species, the Mount Roraima one must constitute a fourth. Upon careful comparison, however, of the different forms I have come to the conclusion that they are simply geographical forms or varieties of one species. Though differing in size and form, all agree in the essential characters peculiar to the species, namely the close, regular, longitudinal striation of the upper whorls, followed upon the body-whorl by a curious rough malleation having an oblique tendency opposite to that of the striæ. The only noticeable variation is in the relative proportions of these characters; the regular striation in some specimens being confined to the upper whorls, and in others covering part of the body-whorl. We have then:—

BULIMUS FULMINANS (Nyst).

Typical form. Spire conical, rather produced; outer lip considerably thickened; longitudinal waved dark brown lines, rather conspicuous upon the lightish brown colour of the shell. The Museum specimens are from the Grotta de Guacharos, near Caripè, Colombia.

Var. *blainvilleana* (*Bulimus blainvilleanus*, Pfr.). Rather larger than type, of lighter substance, shorter spire, more inflated body-whorl, darker colour with waved or zigzag markings obscure.

Hab. Taji, Prov. of Merida, Venezuela.

Var. *loveni* (*Bulimus loveni*, Pfr.). Smaller than type, of very thin substance, lightish colour, with zigzag markings conspicuous.

Hab. Venezuela.

Var. *linteræ* (Sowerby), Plate LVI. fig. 12. Smaller than type, about the size of var. *loveni*, than which it is more solid, with a more produced spire and narrower body-whorl. The zigzag markings are only faintly visible in some specimens.

Hab. Mount Roraima, British Guiana.

EXPLANATION OF PLATE LVI.

- Fig. 1. *Helix* (*Geotrochus*) *horderi*, p. 577.
2. *Achatina* *barriana*, p. 579.
3. — *smithi*, p. 579.
4. *Bulimus* *salteri*, p. 578.
5. — (*Mesembrinus*?) *bowkeri*, p. 581.
6. *Helix* (*Corasia*) *woodfordi*, p. 578.
7. *Bulimus* (*Buliminus*?) *hanningtoni*, p. 580.
8. — (—) *gomezi*, p. 580.
9. — *superstriatus*, p. 578.
10. *Trochomorpha* *godeti*, p. 578.
11. *Achatina* *linteræ*, p. 580.
12. *Bulimus* *fulminans*, var. *linteræ*, p. 582.
13. *Leptopoma* *woodfordi*, p. 581.
14. *Cyclostoma* *hanningtoni*, p. 581.